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<110> RYBAK, SUSANNA M.
GOLDENBERG, DAVID M.
NEWTON, DIANNE L.

<120> IMMUNOCOUPONATES OF TOXINS DIRECTED AGAINST MALIGNANT
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20 25 30

aag aac act ttt atc tat tca cgt cct gag cca gtg aag gcc atc tgt 144
Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile Cys
35 40 45

aaa gga att ata gcc tcc aaa aat gtg tta act acc tct gag ttt tat 192
Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Ser Glu Phe Tyr
50 55 60

ctc tct gat tgc aat gta aca agc agg cct tgc aag tat aaa tta aag 240
Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu Lys
65 70 75 80

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Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Ser Glu Phe Tyr
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Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu Lys
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 65 70 75 80

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 Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile Cys
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Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Phe Glu Phe Tyr
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Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu Lys
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 gat gtt gac tgt aat aat atc atg tca aca aac ttg ttc cac tgc aag⁹⁶
 Asp Val Asp Cys Asn Asn Ile Met Ser Thr Asn Leu Phe His Cys Lys
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 gac aag aac act ttt atc tat tca cgt cct gag cca gtg aag gcc atc¹⁴⁴
 Asp Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile
 35 40 45

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 Tyr Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu
 65 70 75 80

 aag aaa tca act aat aca ttt tgt gta act tgt gag aat caa gct cca²⁸⁸
 Lys Lys Ser Thr Asn Thr Phe Cys Val Thr Cys Glu Asn Gln Ala Pro
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 Cys Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Ser Glu Phe
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 Tyr Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu
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gac aag aac act ttt atc tat tca cgt cct gag cca gtg aag gcc atc 144
Asp Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile
35 40 45

tgt aaa gga att ata gcc tcc aaa aat gtg tta act acc ttt gag ttt 192
Cys Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Phe Glu Phe
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Tyr Leu Ser Asp Cys Asn Ala Thr Ser Arg Pro Cys Lys Tyr Lys Leu
65 70 75 80

aag aaa tca act aat aca ttt tgt gta act tgt gag aatcaa gct cca 288
Lys Lys Ser Thr Asn Thr Phe Cys Val Thr Cys Glu Asn Gln Ala Pro
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Asp Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile
35 40 45

Cys Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Phe Glu Phe
50 55 60

Tyr Leu Ser Asp Cys Asn Ala Thr Ser Arg Pro Cys Lys Tyr Lys Leu
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 35 40 45

Glu Pro Val Lys Ala Ile Cys Lys Gly Ile Ile Ala Ser Lys Asn Val
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Leu Thr Thr Ser Glu Phe Tyr Leu Ser Asp Cys Asn Val Thr Ser Arg
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Val Asp Cys Asn Asn Ile Met Ser Thr Asn Leu Phe His Cys Lys Asp
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aag aac act ttt atc tat tca cgt cct gag cca gtg aag gcc atc tgt	144
Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile Cys	
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aaa gga att ata gcc tcc aaa aat gtg tta act acc tct gag ttt tat	192
Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Ser Glu Phe Tyr	
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Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu Lys	
65	70
75	80
aaa tca act aat aca ttt tgt gta act tgt gag aat caa gct cca gta	288
Lys Ser Thr Asn Thr Phe Cys Val Thr Cys Glu Asn Gln Ala Pro Val	
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Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Ser Glu Phe Tyr	
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 gat gtt gac tgt aat aat atc atg tca aca aac ttg ttc cac tgc aag⁹⁶
 Asp Val Asp Cys Asn Asn Ile Met Ser Thr Asn Leu Phe His Cys Lys
 20 25 30

 gac aag aac act ttt atc tat tca cgt cct gag cca gtg aag gcc atc¹⁴⁴
 Asp Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile
 35 40 45

 tgt aaa gga att ata gcc tcc aaa aat gtg tta act acc tct gag ttt¹⁹²
 Cys Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Ser Glu Phe
 50 55 60

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 Tyr Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu
 65 70 75 80

 aag aaa tca act aat aca ttt tgt gta act tgt gag aat caa gct cca²⁸⁸
 Lys Lys Ser Thr Asn Thr Phe Cys Val Thr Cys Glu Asn Gln Ala Pro
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 35 40 45

 Cys Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Ser Glu Phe
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 Tyr Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu
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atc tgc aac act atc atg gac aac aac atc tac atc gtt ggt ggt cag 96
Ile Cys Asn Thr Ile Met Asp Asn Asn Ile Tyr Ile Val Gly Gly Gln
20 25 30

tgc aaa cgt gtt aac act ttc atc atc tct tct gct act act gtt aaa 144
Cys Lys Arg Val Asn Thr Phe Ile Ile Ser Ser Ala Thr Thr Val Lys
35 40 45

gct atc tgc act ggt gtt atc aac atg aac gtt ctg tct act act cgt 192
Ala Ile Cys Thr Gly Val Ile Asn Met Asn Val Leu Ser Thr Thr Arg
50 55 60

ttc cag ctg aac act tgc act cgt act tct atc act ccg cgt ccg tgc 240
Phe Gln Leu Asn Thr Cys Thr Arg Thr Ser Ile Thr Pro Arg Pro Cys
65 70 75 80

ccg tac tct tct cgt act gaa act aac tac atc tgc gtt aaa tgc gaa 288
Pro Tyr Ser Ser Arg Thr Glu Thr Asn Tyr Ile Cys Val Lys Cys Glu
85 90 95

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Cys Lys Arg Val Asn Thr Phe Ile Ile Ser Ser Ala Thr Thr Val Lys
35 40 45

Ala Ile Cys Thr Gly Val Ile Asn Met Asn Val Leu Ser Thr Thr Arg
50 55 60

Phe Gln Leu Asn Thr Cys Thr Arg Thr Ser Ile Thr Pro Arg Pro Cys
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 Ile Ile Cys Asn Thr Ile Met Asp Asn Asn Ile Tyr Ile Val Gly Gly
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cag tgc aaa cgt gtt aac act ttc atc atc tct tct gct act act gtt 144
 Gln Cys Lys Arg Val Asn Thr Phe Ile Ile Ser Ser Ala Thr Thr Val
 35 40 45

aaa gct atc tgc act ggt gtt atc aac atg aac gtt ctg tct act act 192
 Lys Ala Ile Cys Thr Gly Val Ile Asn Met Asn Val Leu Ser Thr Thr
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cgt ttc cag ctg aac act tgc act cgt act tct atc act ccg cgt ccg 240
 Arg Phe Gln Leu Asn Thr Cys Thr Arg Thr Ser Ile Thr Pro Arg Pro
 65 70 75 80

tgc ccg tac tct tct cgt act gaa act aac tac atc tgc gtt aaa tgc 288
 Cys Pro Tyr Ser Ser Arg Thr Glu Thr Asn Tyr Ile Cys Val Lys Cys
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 35 40 45
 Lys Ala Ile Cys Thr Gly Val Ile Asn Met Asn Val Leu Ser Thr Thr
 50 55 60
 Arg Phe Gln Leu Asn Thr Cys Thr Arg Thr Ser Ile Thr Pro Arg Pro
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 Ile Cys Asn Thr Ile Leu Asp Asn Asn Ile Tyr Ile Val Gly Gly Gln
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 tgc aaa cgt gtt aac act ttc atc atc tct tct gct act act gtt aaa 144
 Cys Lys Arg Val Asn Thr Phe Ile Ile Ser Ser Ala Thr Thr Val Lys
 35 40 45
 gct atc tgc act ggt gtt atc aac ctg aac gtt ctg tct act act cgt 192
 Ala Ile Cys Thr Gly Val Ile Asn Leu Asn Val Leu Ser Thr Thr Arg
 50 55 60
 ttc cag ctg aac act tgc act cgt act tct atc act ccg cgt ccg tgc 240
 Phe Gln Leu Asn Thr Cys Thr Arg Thr Ser Ile Thr Pro Arg Pro Cys
 65 70 75 80
 ccg tac tct tct cgt act gaa act aac tac atc tgc gtt aaa tgc gaa 288
 Pro Tyr Ser Ser Arg Thr Glu Thr Asn Tyr Ile Cys Val Lys Cys Glu
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Cys Lys Arg Val Asn Thr Phe Ile Ile Ser Ser Ala Thr Thr Val Lys
 35 40 45

Ala Ile Cys Thr Gly Val Ile Asn Leu Asn Val Leu Ser Thr Thr Arg
 50 55 60

Phe Gln Leu Asn Thr Cys Thr Arg Thr Ser Ile Thr Pro Arg Pro Cys
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 Ile Ile Cys Asn Thr Ile Leu Asp Asn Asn Ile Tyr Ile Val Gly Gly
 20 25 30

cag tgc aaa cgt gtt aac act ttc atc atc tct tct gct act act gtt 144
 Gln Cys Lys Arg Val Asn Thr Phe Ile Ile Ser Ser Ala Thr Thr Val
 35 40 45

aaa gct atc tgc act ggt gtt atc aac ctg aac gtt ctg tct act act	192
Lys Ala Ile Cys Thr Gly Val Ile Asn Leu Asn Val Leu Ser Thr Thr	
50 55 60	
cgt ttc cag ctg aac act tgc act cgt act tct atc act ccg cgt ccg	240
Arg Phe Gln Leu Asn Thr Cys Thr Arg Thr Ser Ile Thr Pro Arg Pro	
65 70 75 80	
tgc ccg tac tct tct cgt act gaa act aac tac atc tgc gtt aaa tgc	288
Cys Pro Tyr Ser Arg Thr Glu Thr Asn Tyr Ile Cys Val Lys Cys	
85 90 95	
gaa aac cag tac ccg gtt cat ttc gct ggt atc ggt cgt tgc ccg	333
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Lys Ala Ile Cys Thr Gly Val Ile Asn Leu Asn Val Leu Ser Thr Thr	
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Ile Tyr Ile Val Gly Gly Gln Cys Lys Arg Val Asn Thr Phe Ile Ile
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Asn Val Leu Ser Thr Thr Arg Phe Gln Leu Asn Thr Cys Thr Arg Thr
 65 70 75 80

Ser Ile Thr Pro Arg Pro Cys Pro Tyr Ser Ser Arg Thr Glu Thr Asn
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atc tgc aac act atc atg gac aac aac atc tac atc gtt ggt ggt cag 96
 Ile Cys Asn Thr Ile Met Asp Asn Asn Ile Tyr Ile Val Gly Gly Gln
 20 25 30

tgc aaa cgt gtt aac act ttc atc atc tct tct gct act act gtt aaa 144
 Cys Lys Arg Val Asn Thr Phe Ile Ile Ser Ser Ala Thr Thr Val Lys
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gct atc tgc act ggt gtt atc aac atg aac gtt ctg tct act act cgt 192
 Ala Ile Cys Thr Gly Val Ile Asn Met Asn Val Leu Ser Thr Thr Arg
 50 55 60

ttc cag ctg aac act tgc act cgt act tct atc act ccg cgt ccg tgc 240
 Phe Gln Leu Asn Thr Cys Thr Arg Thr Ser Ile Thr Pro Arg Pro Cys
 65 70 75 80

ccg tac tct tct cgt act gaa act aac tac atc tgc gtt aaa tgc gaa 288
 Pro Tyr Ser Ser Arg Thr Glu Thr Asn Tyr Ile Cys Val Lys Cys Glu
 85 90 95

aac cag tac ccg gtt cat ttc gct ggt atc ggt cgt tgc ccg 330
 Asn Gln Tyr Pro Val His Phe Ala Gly Ile Gly Arg Cys Pro
 100 105 110

B
W

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<210> 24
<211> 110
<212> PRT
<213> Rana catesbeiana

<400> 24
Ser Asn Trp Ala Thr Phe Gln Gln Lys His Ile Ile Asn Thr Pro Ile
      1           5           10          15

Ile Cys Asn Thr Ile Met Asp Asn Asn Ile Tyr Ile Val Gly Gly Gln
      20          25          30

Cys Lys Arg Val Asn Thr Phe Ile Ile Ser Ser Ala Thr Thr Val Lys
      35          40          45

Ala Ile Cys Thr Gly Val Ile Asn Met Asn Val Leu Ser Thr Thr Arg
      50          55          60

Phe Gln Leu Asn Thr Cys Thr Arg Thr Ser Ile Thr Pro Arg Pro Cys
      65          70          75          80

Pro Tyr Ser Ser Arg Thr Glu Thr Asn Tyr Ile Cys Val Lys Cys Glu
      85          90          95

Asn Gln Tyr Pro Val His Phe Ala Gly Ile Gly Arg Cys Pro
      100         105         110

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<210> 25
<211> 333
<212> DNA
<213> Rana catesbeiana

<220>
<221> CDS
<222> (1)..(333)

<400> 25
atg tca aac tgg gct act ttc cag cag aaa cat atc atc aac act ccg 48
Met Ser Asn Trp Ala Thr Phe Gln Gln Lys His Ile Ile Asn Thr Pro
 1           5           10          15

atc atc tgc aac act atc atg gac aac aac atc tac atc gtt ggt ggt 96
Ile Ile Cys Asn Thr Ile Met Asp Asn Asn Ile Tyr Ile Val Gly Gly
 20          25          30

cag tgc aaa cgt gtt aac act ttc atc atc tct tct gct act act gtt 144
Gln Cys Lys Arg Val Asn Thr Phe Ile Ile Ser Ser Ala Thr Thr Val
 35          40          45

aaa gct atc tgc act ggt gtt atc aac atg aac gtt ctg tct act act 192
Lys Ala Ile Cys Thr Gly Val Ile Asn Met Asn Val Leu Ser Thr Thr
 50          55          60

cgt ttc cag ctg aac act tgc act cgt act tct atc act ccg cgt ccg 240
Arg Phe Gln Leu Asn Thr Cys Thr Arg Thr Ser Ile Thr Pro Arg Pro
 65          70          75          80

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tgc ccg tac tct tct cgt act gaa act aac tac atc tgc gtt aaa tgc 288
 Cys Pro Tyr Ser Ser Arg Thr Glu Thr Asn Tyr Ile Cys Val Lys Cys
 85 90 95

gaa aac cag tac ccg gtt cat ttc gct ggt atc ggt cgt tgc ccg 333
 Glu Asn Gln Tyr Pro Val His Phe Ala Gly Ile Gly Arg Cys Pro
 100 105 110

<210> 26
 <211> 111
 <212> PRT
 <213> Rana catesbeiana

<400> 26
 Met Ser Asn Trp Ala Thr Phe Gln Gln Lys His Ile Ile Asn Thr Pro
 1 5 10 15

Ile Ile Cys Asn Thr Ile Met Asp Asn Asn Ile Tyr Ile Val Gly Gly
 20 25 30

Gln Cys Lys Arg Val Asn Thr Phe Ile Ile Ser Ser Ala Thr Thr Val
 35 40 45

Lys Ala Ile Cys Thr Gly Val Ile Asn Met Asn Val Leu Ser Thr Thr
 50 55 60

Arg Phe Gln Leu Asn Thr Cys Thr Arg Thr Ser Ile Thr Pro Arg Pro
 65 70 75 80

Cys Pro Tyr Ser Ser Arg Thr Glu Thr Asn Tyr Ile Cys Val Lys Cys
 85 90 95

Glu Asn Gln Tyr Pro Val His Phe Ala Gly Ile Gly Arg Cys Pro
 100 105 110

B1
B1
 <210> 27
 <211> 2855
 <212> DNA
 <213> Rana pipiens

<220>
 <221> CDS
 <222> (97)...(477)

<400> 27
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tctcttatat ataaaaggcct gatcacgact tccaga atg ttt cca aaa ttc tca 114
 Met Phe Pro Lys Phe Ser
 1 5

ttt ctc ctg ata ttt gca gtt ttg agt ctc act cat aag tcc tta 162
 Phe Leu Leu Ile Phe Ala Val Val Leu Ser Leu Thr His Lys Ser Leu
 10 15 20

tgt caa gac tgg ctt acg ttt cag aag aag cac ctg aca aac acc cg 210
 Cys Gln Asp Trp Leu Thr Phe Gln Lys Lys His Leu Thr Asn Thr Arg
 25 30 35

gat gtt gac tgt aat aat atc atg tca aca aac ttg ttc cac tgc aag 258
 Asp Val Asp Cys Asn Asn Ile Met Ser Thr Asn Leu Phe His Cys Lys
 40 45 50

gac aag aac act ttt atc tat tca cgt cct gag cca gtg aag gcc atc 306
 Asp Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile
 55 60 65 70

tgt aaa gga att ata gcc tcc aaa aat gtg tta act acc tct gag ttt 354
 Cys Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Ser Glu Phe
 75 80 85

tat ctc tct gat tgc aat gta aca agc agg cct tgc aag tat aaa tta 402
 Tyr Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu
 90 95 100

aag aaa tca act aat aca ttt tgt gta act tgt gag aat caa gct cca 450
 Lys Lys Ser Thr Asn Thr Phe Cys Val Thr Cys Glu Asn Gln Ala Pro
 105 110 115

gta cat ttc gtg ggt gtc gga cat tgc tagaaatatg tttgacaaca 497
 Val His Phe Val Gly Val Gly His Cys
 120 125

ggatgtgat aagcagctgc aagaaattat tttgaagtga atttactaaa gacactaatt 557

ttgcataaat tttccccaga gcttaccgggt agtaagaaaa ttccaacagg gagccaagca 617

cagaaagtaa actaaggagc caaagtaatt ataaaagtca cactggaccg ctgctactgc 677

actcagatga ccaaattgaga aacagacaaa aacagcagag ttggaaagcg cagatccggg 737

aggatggccggg gagtcaattt gggatggagt ccatgtgaga ttggaaaccg ttttgtctg 797

gtgaaggatg tggccgggtgc acagtacaca tggggaaaga tagtcggatt ggccgggctc 857

gctgtgggtgg tgccggcggt tgagccaaag gtgggtggga gatggctgtc cccccttctg 917

tgggggctgt ggacagaggg agctgcggac caggggtggg aggctggag agaattttca 977

aacagctgac gtggccgggg ctgggcagca tcggggaggg gaagggtgg gtcagatcc 1037

aggaaggatg gtcactgtat gaccagagtga gaagatggca gagccgctgc agtggccggg 1097

gagaccagag ggatctgtgc ccagccttgc ccctccctga tgtggccctgt tttgggttat 1157

ggtaaccgct cccagctgtt tgggggtgtt ttccggcttc gcattttgg tctggctgc 1217

cctctgtcca cggccctcat ggaggggggg tggcatttc tccaccgcct ttggctctgt 1277

tgctggcact gtcgcagcga gtttggccag tcatggctca tttccatt tgcacatgtgt 1337

gttggttgca tgggggtgtcg gcggtggact gtttgaatt tcacatggat tccatcttcg 1397

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 agtggatgca gtgaaactct ggtgattacc atcatccaat catgtgcaag aaaaaatatt 1517
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 gggaaaatga gtgcaactgc acttccaaag ttcacagtct atttgcctt agtaaatcca 1637
 ccccattatt tctgagcaga ggacaaatct atggcaacaa aaaaacttta cctactgaat 1697
 tattttatat tgattgaaga taatcttct ttcatattcct aaatattgtt atcaaaatatta 1757
 atacataaca gctatgtatt ataccacagc agcaaatgtt aaaatagttt taaacgtaaa 1817
 atatgttttta ccttaaagtg gaagtaaact tctatcacta aattttacct ataggtgaga 1877
 cccatgcgcctt cttcaggaat ggccgctggc gctgttcctt cagagccctg tgctgcgaac 1937
 ggcggctccc gtgtgcattgt acaggagtga cgtcatcaca gctccggcca gtcacagagt 1997
 tagagttcaa gtgtgagtgg cttgagccac gatgatgtcg ctcccaaaca tgtgtgcggg 2057
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 catatgcgtg ggtgacgtca ctagctgcat ctaaagtaat atctcctaaa caatgcacat 2177
 ttaggagata gttacagtac ctatggtaa gccttattgtt aggcttacct ataggtaaaa 2237
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 cctatagttgg ttgaaagtag ttgaaaataa gatggcctgc agggctttaa aaaggctagg 2417
 atagcacagt atccacatga ggcaccagat ctcgcctccc cacacatgag tagcaaggag 2477
 caatggtaat gtgagttct taggctcgac cgttaatag cggtggccctt ccaagtgata 2537
 catggagat aagcagatgt ccgcgtatgc acgcagacat atgtggcgg atgttggat 2597
 aggacgatca gagagatgtc cagatctgcc cgaaggagaa aggtggaaac atccattcaa 2657
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 aaccacacca ggcccaaagg agggtggccc cagtggaccg tataggaaaca gcactcagct 2777
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 aaaaaaaaaa aaaaaaaaaa 2855

<210> 28
 <211> 127
 <212> PRT
 <213> Rana pipiens

<400> 28
 Met Phe Pro Lys Phe Ser Phe Leu Leu Ile Phe Ala Val Val Leu Ser
 1 5 10 15
 Leu Thr His Lys Ser Leu Cys Gln Asp Trp Leu Thr Phe Gln Lys Lys
 20 25 30
 His Leu Thr Asn Thr Arg Asp Val Asp Cys Asn Asn Ile Met Ser Thr
 35 40 45
 Asn Leu Phe His Cys Lys Asp Lys Asn Thr Phe Ile Tyr Ser Arg Pro
 50 55 60
 Glu Pro Val Lys Ala Ile Cys Lys Gly Ile Ile Ala Ser Lys Asn Val
 65 70 75 80
 Leu Thr Thr Ser Glu Phe Tyr Leu Ser Asp Cys Asn Val Thr Ser Arg
 85 90 95
 Pro Cys Lys Tyr Lys Leu Lys Ser Thr Asn Thr Phe Cys Val Thr
 100 105 110
 Cys Glu Asn Gln Ala Pro Val His Phe Val Gly Val Gly His Cys
 115 120 125

BN
 <210> 29
 <211> 4
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 CAAX motif

<400> 29
 Cys Val Ile Met
 1

<210> 30
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 30
 agrgatgtkg attgygataa yatcatg

27

<210> 31
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

 <400> 31
 aaartgmacw ggkgcctgrt tytcaca 27

<210> 32
 <211> 96
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 32
 cagaactggg ctactttcca gcagaaacat atcatcaaca ctccgatcat ctgcaacact 60
 atcatggaca acaacatcta catcggtt ggtcag 96

<210> 33
 <211> 86
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 33
 tacatcggtt gtggtcagtg caaacgtgtt aacactttca tcatctctct gctactactg 60
 ttaaacgttat ctgcactgggt gttatc 86

<210> 34
 <211> 96
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 34
 atctgcactg gtgttactaa catgaacgtt ctgtctacta ctgcgtttcca gctgaacact 60
 tgcactcgta cttctatcac tccgcgtccg tgcccg 96

<210> 35
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 35
 gttgataaca ccagtgcaga t 21

<210> 36
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 36
 atctgcactg gtgttatcaa c 21

<210> 37
 <211> 95
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 37
 actccgcgtc cgtagcccgta ctcttctcgactgaaacta actacatctgcgtttaatgc 60
 gaaaaccaggat acccggttca ttgcgttgtt atcgg 95

B1
 <210> 38
 <211> 71
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 38
 atatatcttag aaataatttt atttaacttt aagaaggaga tatacatatgcgtttaatgc 60
 ctactttcca g 71

<210> 39
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 39
 cgccgcggat ccctactacg ggcaacgacc gataccagcg aatgaac 48

<210> 40
<211> 96
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 40
cagaactggg ctactttcca gcagaaacat atcatcaaca ctccgatcat ctgcaacact 60
atcctgcaga acaacatcta catcggttgg ggtcag 96

B1

<210> 41
<211> 96
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 41
atctgcactg gtgttatcaa cctgaacgtt ctgtctacta ctcgtttcca gctgaacact 60
tgcactcgta cttctatcac tccgcgtccg tgcccg 96

<210> 42
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 42
ggattccata tgcagaactg ggctatttc cag 33

<210> 43
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic 6X His tag

<400> 43
His His His His His His
1 5